

REMARKS

The Examiner has objected to the Abstract as reciting “SPM” instead of “scanning probe microscopy (SPM)”. The abstract has been corrected as suggested by the Examiner. The Examiner has also objected to the brief description of the drawing as failing to provide a description of FIG. 2(B). A brief description of this drawing was provide, but was not identified as pertaining to FIG. 2(B). The brief description of FIG. 2 has been amended to correct this error.

Claims 11, 13, 14, 21 and 24 stand rejected under 35 USC 112, second paragraph. Claims 11, 13, 14, and 21 have been amended to correct the antecedent basis issues raised by the Examiner. Further, claim 19 has been amended to clarify that the coded probes bind to the target molecules during the contacting step. The probes that bind during this step are then aligned--however, they need not, as specified in claim 24, still be bound during the aligning step.

Claims 1-6, 9, and 15-18 stand rejected under 35 USC 102(e) as being anticipated by Mirkin. Claims 7 and 8 stand rejected under 35 USC 103(a) as being unpatentable over Mirkin in view of Birkenmeyer. Claims 10-14 and 19-23 stand rejected under 35 USC 103(a) as being unpatentable over Mirkin in view of Nygren. These rejections are respectfully traversed.

In all of these pending rejections, the Examiner relies upon Mirkin to show a) obtaining one or more coded probes, each coded probe comprising a probe molecule attached to at least one nano-barcode; b) contacting one or more target molecules with the coded probes; c) organizing the coded probes that bind to the one or more target molecules; d) identifying the organized coded probes; and e) detecting the one or more target molecules based on the bound coded probes, as recited in claim 1.

Independent claims 1 and 19 have been amended to specify that each coded probe comprises a probe molecule attached to at least one nano-barcode, and at least two of the coded probes comprise identifiably different nano-barcodes. As described in the specification paragraphs [0052]-

[0057], by using identifiably different nano-barcodes for each different type of coded probe, the type of probe being scanned can be identified in a mixture of different probes.

Mirkin describes methods in which nanoparticles are used as tags on probe molecules. However, Mirkin only describes detecting whether these probes are present or not-- by for example a change in color during hybridization of the probes. The methods in Mirkin do not describe methods in which different probes are labeled identifiably different from other probes as claimed. Accordingly, the methods in Mirkin cannot be used to identify the type of probe being scanned in a mixture of different probes as described above. Since Mirkin does not describe a process in which coded probes that comprise identifiably different nanobarcodes can be utilized as claimed, the rejections of claims 1-23 as anticipated by Mirkin or as obvious over Mirkin in view of various other references should be withdrawn.

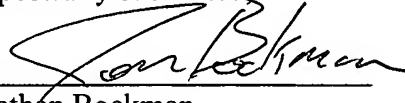
The Examiner has provisionally rejected claim 1-23 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4, 5, 9-15, 17, 18 , and 28-31 of copending Application No. 10/251,152. Applicants acknowledge this rejection, but since it is only provisional no action is required at this time.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **070702006420**.

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Respectfully submitted,

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